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gave no osazone reaction. The dextrine thus obtained is strongly reducing to Fehling's solution, and is considered by the authors as the end dextrine of cellulose. Diastase will not split cellulose dextrine. They also derived zellobiose by the Madsen method. The contents of the first stomach of cattle, the intestine, and the pancreas bore no enzyme that would split zellobiose. They conclude that the splitting of this substance in the alimentary canal of the cattle must be due to cellulose bacteria.—WM. CROCKER.

Ecological diversity and generic coefficients.—The principle first enunciated by Jaccard, and noted in this journal,<sup>11</sup> that the ratio between species and genera, or the generic coefficients, varies inversely with the diversity of the habitat conditions, has received additional support from the investigations of Dufrenoy<sup>12</sup> upon the distribution of parasitic fungi in different habitats. Diversity of ecological conditions was found at altitudes of 1100 m. to 2000 m. in the valley of Barèges, where the generic coefficient for rusts was 20 per cent and for all fungi 40 per cent. Contrasted with this were the uniform conditions in a wheat field showing generic coefficients for its fungi of 70 per cent, and upon sand dunes with coefficients ranging from 90 to 100 per cent.—Geo. D. Fuller.

Lignins.—Pringsheim and Magnus,<sup>13</sup> in a study of lignins, have obtained some interesting results. When wood or straw is treated with sodium hydrate in the cold, all the acetic acid liberated is derived from the lignins of these materials. When these materials are boiled with sodium hydrate, either under pressure or otherwise, most of the acetic acid formed is derived from the lignins; but a small part is derived from the cellulose and none from the pentoses. The lignin of the white beech yields about 37.85 per cent of its weight of acetic acid, and the lignin of conifer wood about 19.48 per cent.—WM. CROCKER.

Dioecism in Thalictrum.—SCHAFFNER<sup>14</sup> has studied *Thalictrum dasycarpum* in reference to intergrades between the monoecious and dioecious condition. It seems to be a peculiarly favorable form for this purpose, and almost every conceivable intermediate in the expression of "maleness" and "femaleness" was found. The author rightly calls attention to the fact that the physiological and ecological factors concerned in these various expressions must be taken into consideration for an understanding of the evolutionary changes leading from the bisporangiate to the monosporangiate condition.—J. M. C.

<sup>&</sup>lt;sup>11</sup> Вот. GAZ. **57**:540. 1914.

<sup>&</sup>lt;sup>12</sup> Dufrenoy, J., Diversité écologique et coefficients génériques. Bull. Trim. Soc. Mycol. Fr. 35:27-46. 1919.

<sup>&</sup>lt;sup>13</sup> Pringsheim, H., and Magnus, H., Über den Acetylgehalt des Lignins. Hoppe-Seyler Zeit. Physiol. Chem. 105:179–186. 1919.

<sup>&</sup>lt;sup>14</sup> Schaffner, J. H., Dioeciousness in *Thalictrum dasycarpum*. Ohio Jour. Sci. 20:25-34. 1919.